

CLAIMS

What is claimed is:

1. An organic light-emitting diode structure comprising:
first and second anodes;
first and second organic light-emitting layers disposed between the first and second anodes; and
a first electrode disposed between the first and second organic light-emitting layers.
2. The organic light-emitting diode structure according to claim 1, wherein light is emitted from at least one of the first and second organic light-emitting layers when an electric current is passed between one of the first and the second anodes and the first electrode.
3. The organic light-emitting diode structure according to claim 1, further comprising a second electrode disposed between the first and the second organic light-emitting layers.
4. The organic light-emitting diode structure according to claim 3, further comprising an insulating layer disposed between the first and second electrodes.
5. A display comprising:
organic light-emitting diode structures forming an array, each of the organic light-emitting diode structures comprising:

first and second anodes;

first and second organic light-emitting layers disposed between the first and the second anodes; and

a first electrode disposed between the first and the second organic light-emitting layers.

6. The display according to claim 5, further comprising:
a first transistor coupled to the organic light-emitting diode structures; and
a second transistor coupled to the other the organic light-emitting diode structures.
7. The display according to claim 6, wherein the first transistor is coupled to one of the first and the second anodes of the organic light-emitting diode structures while the second transistor is coupled to the other one of the first and the second anodes of the organic light-emitting diode structures.
8. The display according to claim 6, further comprising a third transistor coupled to the first and the second transistors.
9. The display according to claim 6, wherein the first and the second transistors drive the organic light-emitting diode structures.
10. The display according to claim 8, wherein the third transistor switches the first and second transistors.

11. The display according to claim 5, wherein light is emitted from at least one of the first and the second organic light-emitting layers when an electric current passes between one of the first and the second anodes and the first electrode.

12. The display according to claim 5, wherein at least one of the organic light emitting diode structures further comprises a second electrode disposed between the first and the second organic light-emitting layers.

13. The display according to claim 12, further comprising an insulating layer disposed between the first and the second electrodes.

14. A telecommunication device comprising:

a main body;

a flip-up door connected to the main body; and

a display beneath the flip-up door, the display comprising:

organic light-emitting diode structures forming an array, each of the organic light-emitting diode structures comprising:

first and second anodes;

first and second organic light-emitting layers disposed between the first and the second anodes; and

a first electrode disposed between the first and second organic light-emitting layers.

15. The telecommunication device according to claim 14, wherein at least one of the organic light emitting diode structures of the array further comprises a second electrode disposed between the first and the second organic light-emitting layers.

16. The telecommunication device according to claim 15, wherein the at least one of the organic light emitting diode structures of the array further comprises an electrical insulating layer disposed between the first and the second electrodes.

17. The telecommunication device according to claim 14, further comprising:
a first transistor coupled to the organic light-emitting diode structures; and
a second transistor coupled to the organic light-emitting diode structures.

18. The telecommunication device according to claim 17, further comprising a third transistor coupled to the first and the second transistors.